MANUAL
Monark Ergometer 874E

MONARK
EXERCISE AB

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CONGRATULATIONS ON YOUR NEW EXERCISE BIKE
designed by Monark Exercise AB, Sweden. Monark has been the world's leading manufacturer of high quality ergometers and exercise cycles for more than 40 years.

GENERAL
It is important that you keep your ergometer clean and properly lubricated. Most important is to protect the chromed and zinced parts but also painted parts benefit from the same protection. When cleaning and lubricating be sure to check that all screws and nuts are properly tightened. Be sure that all moving parts as crank and flywheel is working normal and that no unnormal play or sound excists. i. e. play in bearings causes fast waring and with that follows a highly reduced lifetime.
NOTE: The serial number of your test cycle is placed according to fig 1 page 6.

WARRANTY
As on any quality product there may be an exceptional fault due to material or manufacture. If such a fault should arise on your exercise cycle, please return to the place of purchase for necessary repair.
Monark products and parts are guaranteed against defects in materials and workmanship for a period of one year from the initial date of purchase of the unit.
Parts found to need replacement due to normal wear and tear, such as brake belts, are not covered. This guarantee covers parts only, not labor costs associated with the repair.
This guarantee does not apply to cases of abuse or vandalism, nor does it extend to any injury or loss to person or property caused directly or indirectly by any Monark products.

In the event of a defect in material or workmanship during the warranty period, Monark Exercise will repair or replace (at its option) the product. Monark Exercise will do so at its expense for the cost of materials but not for labour or shipping

PARTS BELOW ARE NOT ASSEMBLED.

ASSEMBLY INSTRUCTION:
See pages 5-7.

HANDLEBAR/HANDLEBAR STEM

PEDAL, LEFT

PEDAL, RIGHT

SUPPORTING TUBE, FRONT

SUPPORTING TUBE, REAR

WEIGHT HOLDER

Tip the cycle forward. Assemble the rear supporting tube with two bolts and two nuts.
NOTE: Use the accompanying spanner.
See fig 1.

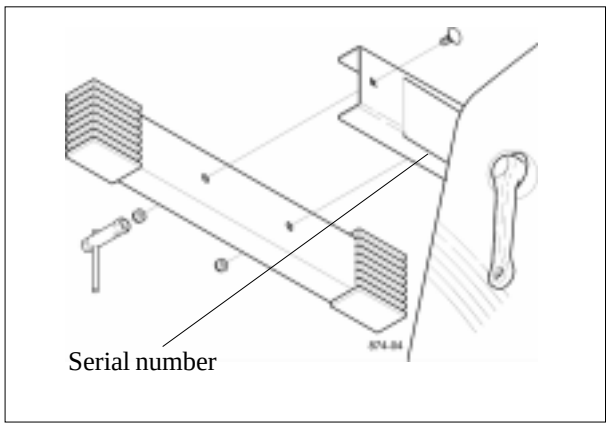

Fig. 1

Tip the cycle backwards. Assemble the front supporting tube with two nuts onto the two fixed bolts.
NOTE: Use the accompanying spanner.
See fig 2.

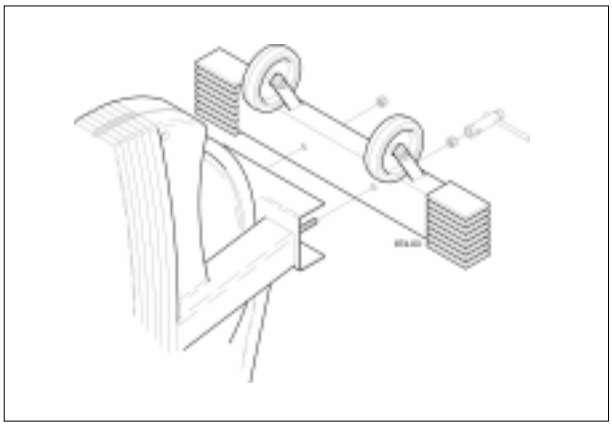

Fig. 2

Before the handlebar stem is assembled be sure the expanding wedge is loose. Insert the handlebar stem into the frame tube and tighten the expanding bolt firmly by means of the lever.
NOTE: **The handlebar stem should be inserted into the frame tube at least 3 inches (about 8 cm).** See fig. 4.
Usually this measure is marked out on the stem.

To change the height of the handlebar, loosen the expanding bolt about 5 mm. Give the bolt a light punch to release the expanding wedge. Adjust the handlebar to the desired position and tighten the expanding bolt again by means of the lever.

In order to change the inclination of the handlebar, loosen the expanding bolt one turn. Adjust to desired angle of handlebar and tighten the expanding bolt/lever firmly again.

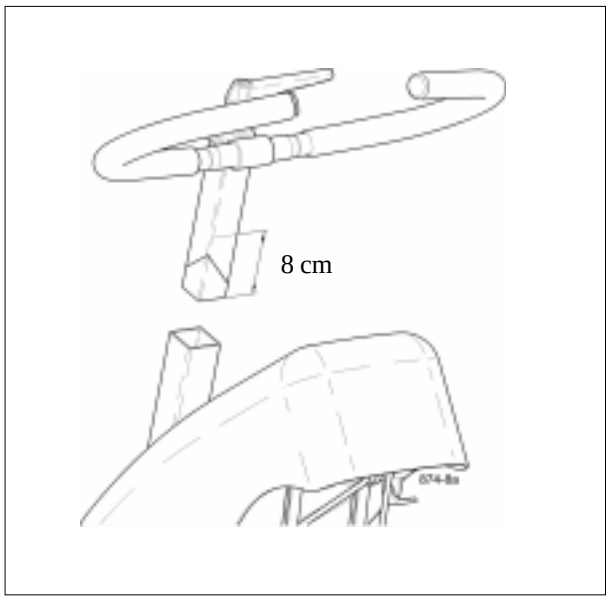

Fig 4

Check that the inclination of the saddle is comfortable and that the sadle post bracket is firmly tightened. In order to change the inclination of the saddle, loosen the saddle bracket and tighten firmly again.
Adjust to desired height position of saddle/saddle post by loosening the saddle post locking bolt.
NOTE: Tighten firmly. See fig 3.

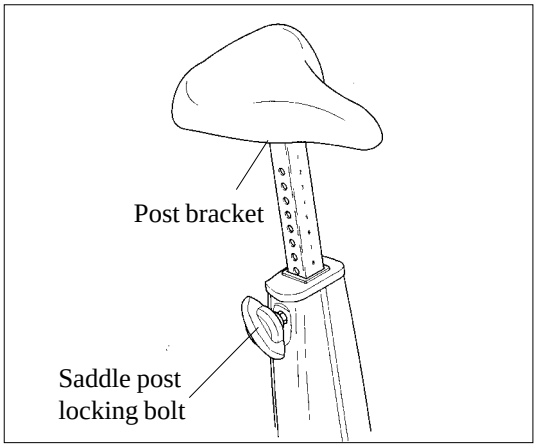

Fig. 3

Pedal marked R (Right) is to be assembled on the right hand side of the cycle (the chain wheel side). The pedal axle has a right hand thread and must be threaded onto the crank clockwise. Tighten firmly. See fig 5.

Pedal marked L (Left) is to be assembled on the left hand side of the cycle. The pedal axle has a left hand thread and must be threaded onto the crank counter clockwise. Tighten firmly. See fig 5.

NOTE! Check now and then that both pedals are still firmly tightened. If not the threading in the pedal arms will be damaged.
Also check that the pedal arms are firmly tightened on the crank axle. If nessecary tighten the axle bolt. See fig. 5.

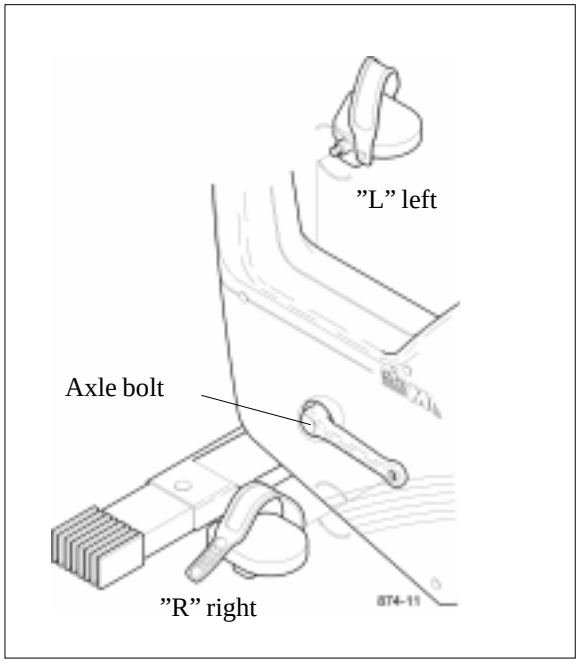

Fig. 5

Unscrew the two nuts holding the tension device frame.
Put on the weight holder as in fig. 6.
Screw on and tighten firmly the two nuts again.

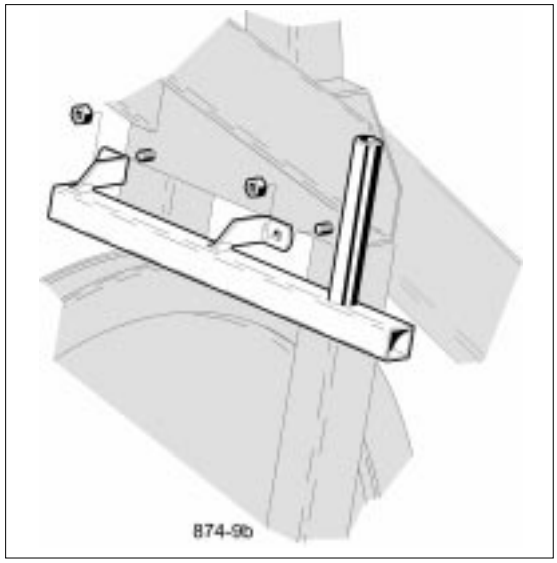

Fig. 6

OPERATION INSTRUCTION

NOTE! The use of Ergometer 874E can be fysically very strenuous why it is highly recommended to consult a doctor before use for persons not used to hard exercise and if you not feel perfectly healthy.

Monark Ergometer model 874E is a test cycle, which have a braking system, of which workload can be set by weights in a weight basket. Weights are in sizes 1 kg, 0,5 kg and 0,1 kg. This makes it possible to vary the workload from 1 kg up to maximum 12 kg in steps of 0,1 kg. NOTE: 1 kg is the lowest work load that can be set as this is the weight of the basket itself. A weight basket that only weighs 0,5 kg is available as an option. The weight basket can also be set in its upper free/resting position and does then not give any work load at all. The weight basket is released by pushing the stop lever, on the left side of the bike , backwards.

The cycle is also equipped with an electronic meter showing pedal revulotions per minute (RPM), heart rate in bpm (HR), exercise time in minutes and seconds (TIME), cycling speed in km per hour or miles per hour (SPEED), covered distance in km or mile (DISTANCE), burned Calories (CAL) and the power/workload on the cycle(WATT).
The watt reading is depending on the pedalling speed which means that the watt figure can be fine tuned by means of increasing or decreasing the speed/pedal rpm.
Furthermore the workload (kp =weight basket + weights in kg) can be set which gives a reading of burned calories (CAL) as well as power (WATT) on the meter display. The energy is usually expressed in kJ (kilo Joule) or cal (kilocalorier, kcal). En kcal is aprox.4,2 kJ. The power is depending on the pedalling speed which makes it possible to adjust the workload/power by increase or dedcrease the speed.

The height of the saddle should be adjusted so that, when sitting comfortably with the middle of the foot is above the pedal axle and with the pedal in its lowest position. The knee should only be slightly bent.

The adjustment of the handlebar should give a comfortable ride. When cycling for a long time, it may be suitable some time during the exercise to change the position of the handlebar.

NOTE! At transport the brake cord should be somewhat tightened to prevent it from falling off the flywheel.

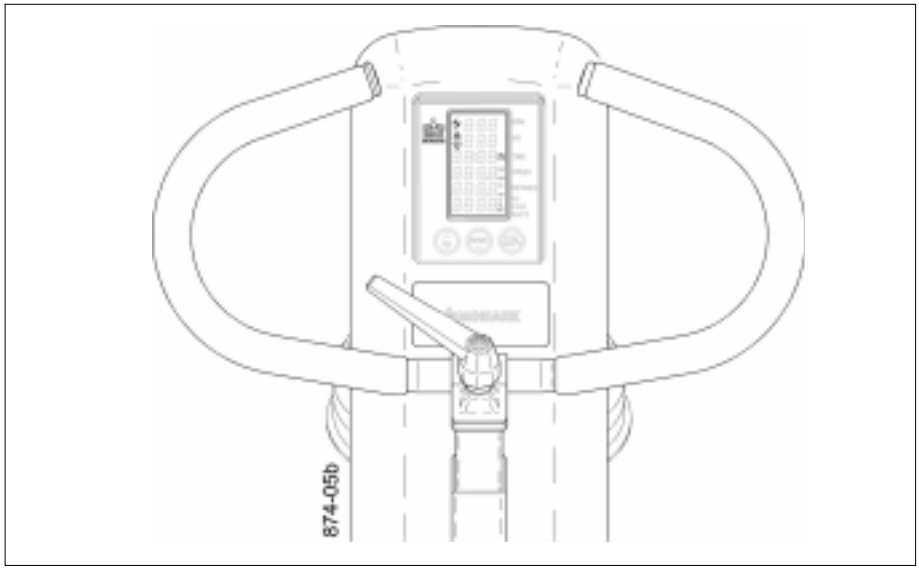

Fig. 7

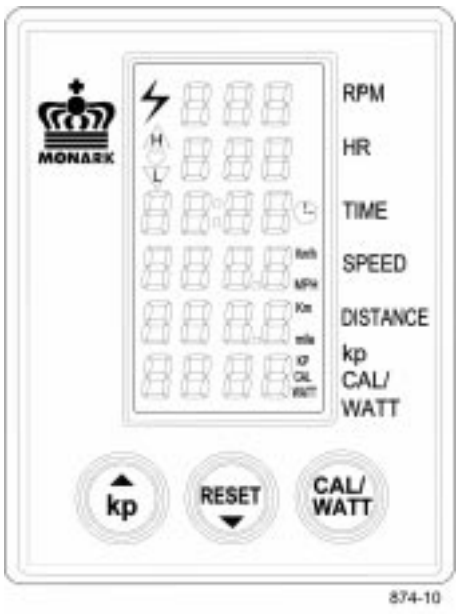

Fig. 8.

FITNESS COMPUTER

SPECIFICATIONS:

RPM:	0 - 199	pedalrev./min
HR:	50 - 240	bpm
TIME:	0:00 - 99.59	min:sek
SPEED:	0 - 99	km/h or mph
DISTANCE:	0.0 - 99.9	km or mile
FORCE	0.0 - 7.0	kp
CALORIES	0 - 999	kcal
WATT	0 - 7 x rpm	watt

Power supply:	1.5 V x 2	AA(R6)
Storing temp.:	-10ºC - +60ºC	
Operating temp.:	0ºC - 50ºC	

Setting KM or MILE
Km and km/h is the dafault setting from the factory.
If you want to make a setting in mile take the meter out of the panel.
Turn off the meter by taking out one battery.
On the back side is a switch with two settings - 1 and ON. See fig. 9.
1 is equal to km and km/h and is the default setting.
ON is equal to mile and mph. Choose position and install the battery again.
Put the meter back again into the panel.

FUNCTION
Press any button or move the pedal to turn on the meter.
At the display for heart rate (HR) a ♥ is lit which means that the meter is trying to find a pulse signal from an external source (chestbelt with electrodes, our part.no 9339-91).
If the meter can not find such a signal this HR function is automatically turned of after 30 seconds. When the function is turned off the ♥ symbol is not lit any more.
The heart rate function can be turned on again by preessing a button.

Timer starts automatically when pedals are moved. Meter values for Time, Distance and Calories can be set to zero by pressing the RESET button for more than 2 seconds.
To get correct raedings for calories and watts the kp value on the electronic meter has to be set to the same value as the workload that is the weight of the basket including the weights in it.
Example: The workload is 3 kg (weight basket 1 kg + 2 x 1kg weight). Press the kp button to the left on the meter. The lower display window is now flashingand showing figures in kp. Increase or decrease in steps of 0.1 kp by pressing the kp button(▲) or the RESET button(▼) until the reading is corresponding with the actual or desired kp values (workload) from the weight basket. After that press the CAL/WATT button to either show the CAL or WATT figures.
The watt reading in the display is depending on the pedalling speed. The watts can accordingly be adjusted by increasing or decreasing the pedalling speed.
Calories are calculated all the time.

Do not expose the electronic meter to direct sunlight or extremely high temperature. Do not use any dissolvents when cleaning. Use only dry cloth.

REPLACEMENT OF BATTERIES

NOTE: The batteries are at delivery in a separat package.
If the batteries have been stored for a long time, the battery power can be too low to show all functions on the meter. If so, batteries must be replaced.

The battery package can be reached from the down side of the panel.
Be careful to put in the new batteries with + and - correctly positioned. See fig. 9.
If needed the complete fitness computer can be taken out from the panel by loosing the upper fastening plate on the down side of the meter/panel. Lift in the upper end of the meter and take it out from the panel.
The batteries, 2 x 1.5V size AA(R6), which are placed in the holder on the backside of the meter, can then easily be changed. See fig.8.
After the batteries has been replaced all segments in the display are visible and a buzzer will sound for two seconds. After 2 seconds the meter turns to main display again and normal function.
Put the meter into the housing again.

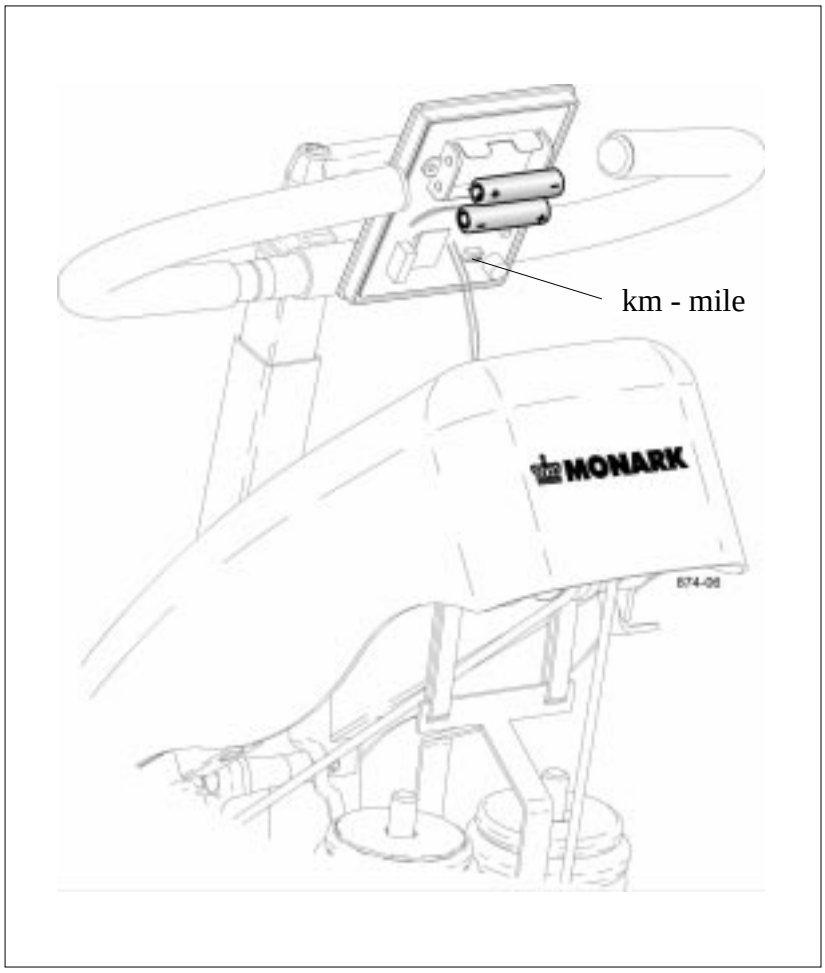

Fig. 9

BRAKE CORD/BELT REPLACEMENT

Remove the instrument cover by loosen the screws on each side of the cover.
Take the return strap, see fig. 11, and lift up the weight basket until it locks in its upper position.
Loosen the cord/belt bracket, see fig. 11, and take away the brake belt from the tension center.
Loosen or cut away the knot or tie up the knot at the other end of the belt. After that take away the belt from the bike.
When assembling a new brake cord/belt, first enter one end into the belt whole in the tension center, see fig. 11, and tie a knot and let the knot fall into the bigger part of the hole.
Then assemble the new belt exactly as the old one.
See fig. 10.

NOTE! When replacing the brake cord/belt it is recommended to clean the brake surface. See BRAKE SURFACE - BRAKE BELT.

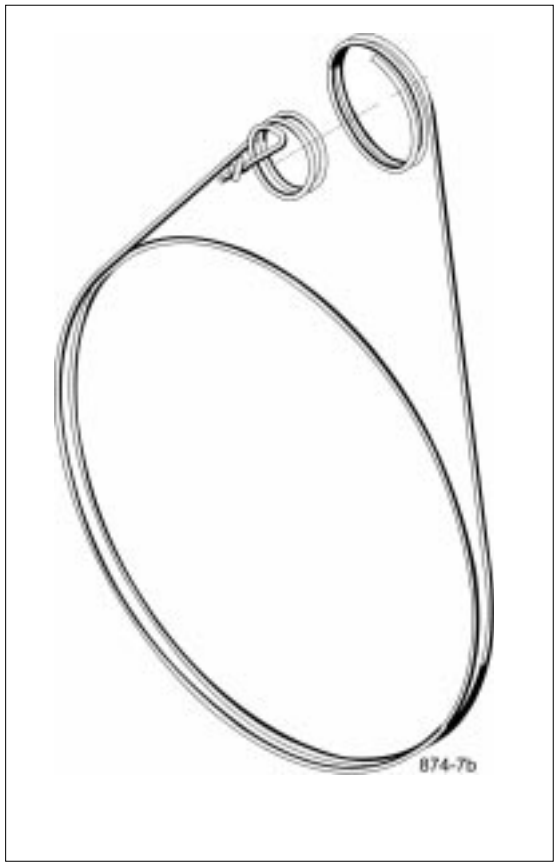

Fig. 10

ADJUSTING THE BRAKE CORD/BELT TENSION

At first check that the brake belt is lying correct on the flywheel brake surface.
See fig. 10 and 11.

Put 4 kg in the weight basket. Rotate the flywheel by hand. The basket shall now lift up so the distance to the flywheel is at least 40 mm. and maximum 80 mm. If this is not the case the brake belt has to be loosened or tightened a little at the tension center. If the basket is too low shorten the belt somewhat and if the basket is too high lenghten the cord somewhat.

Lock the weight basket in its upper position and after that loosen the cord bracket somewhat so that the cord length can be adjusted. Tighten the braket again and release and check if the measurements above are OK when the flywheel is rotated by hand.
Repeat the above if necessary.

Note: The basket will always give the correct workload wherever it hangs between the upper stop position and the lower stop just above the flywheel. The measurements above just gives a good margin - about 30 mm in each direction.

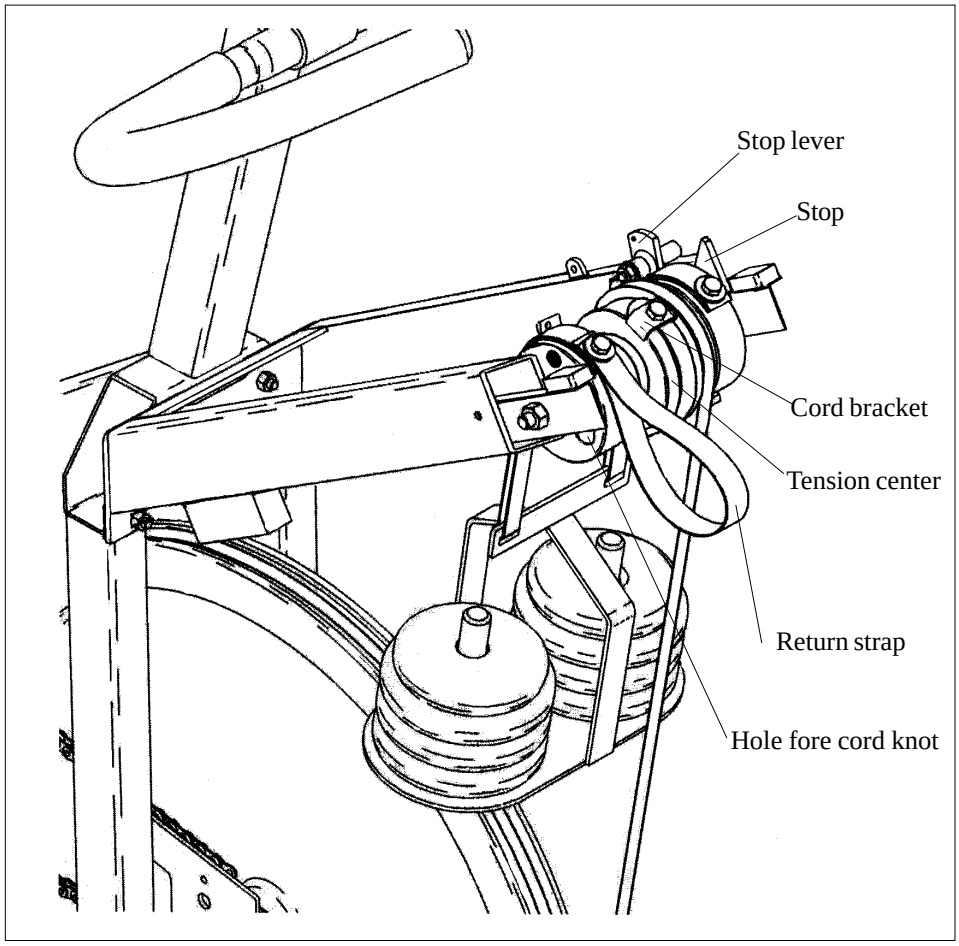

Fig.11

FLYWHEEL BRAKE SURFACE - BRAKE BELT

The brake cord should be regularly checked to ensure that it has not suffered execessive wear. If it looks worn it should be replaced.
Deposits of dirt on the brake cord and irregularities on the brake surface may cause the unit to operate unevenly and will also wear down the brake cord faster and the unit can become noisy. The brake surface of the flywheel should then be ground off with a fine sand paper and any dust removed with a clean dry cloth.
Lift the weight basket to its upper stop position.
Grind with a fine sand paper. See fig. 12.
Grinding is easier to perform if a second individual cautiously and slowly pedals the cycle.

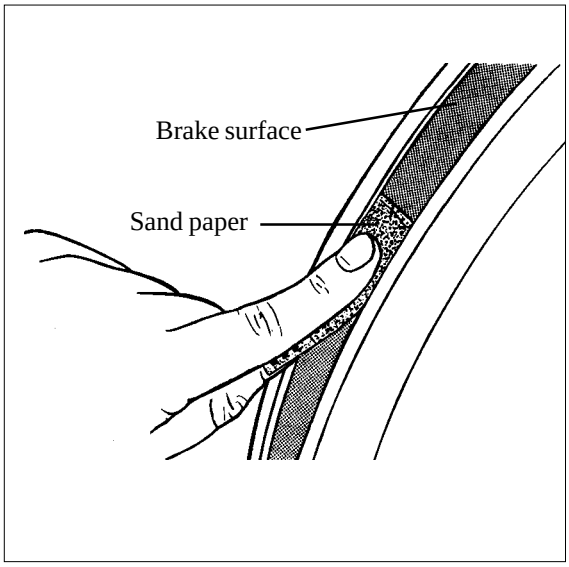

Fig.12

NOTE: Always keep the brake belt contact surface clean and dry. No lubricant is allowed to be used.
We recommend to replace the brake belt when cleaning the contact surface.
As regards assembly and adjustment of the brake belt, see previous page.

CHAIN ½ x 1/8“
It is strongly recommended that a cahin solvent be used to keep the chain clean. Excess dirt built up on the chain will cause excess wear. A chain lubricant and solvent for normal road bikes may be uaed.

Check the lubrication and tension of the chain at regular intervals. In the middle of its free length the chain should have a minimum play of 5 mm. See fig 12. When the play in the chain is about 20 mm (<1 inch) the chain must be tightened otherwise it will cause unnormal wear of the chin and chainwheels. Because of this it is always recommende to keep the chain play as little as possible. When the chain has become so long that it can no longer be tightened with the chain adjusters it is worn out and shall be replaced with a new one.

ADJUSTING CHAIN
Remove left and right frame cover.
To adjust the chain the hub nuts should be loosened. Loosening or tightening the nuts on the chain adjusters will then move the hub and axle forward or backward. Adjust according to above recommendation. Then tighten the nuts on the hub axle again. See fig 12.

CHAIN REPLACEMENT
Loosen the chain adjusteras much as possible. Dismantle the cahinlock and remove the chain. Put on a new chain and assemble the chain lock.The spring of the chain lock should be assembled with the closed end in the movement direction of the chain. Use a pair of tongs for dismantling and assembling the spring. See fig 13.
Adjust chain adjusters to chainplay according to above. Tighten axle nuts firmly.
Put on frame covers again.

NOTE: At assembly the flywheel has to be parallell with the center line of the frame. Otherwise the chain and chainwheels makes a lot of noise and wears out very rapidly.

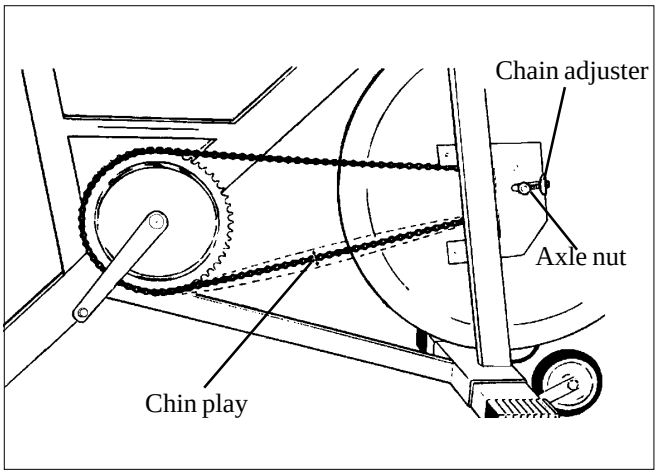

Fig. 13

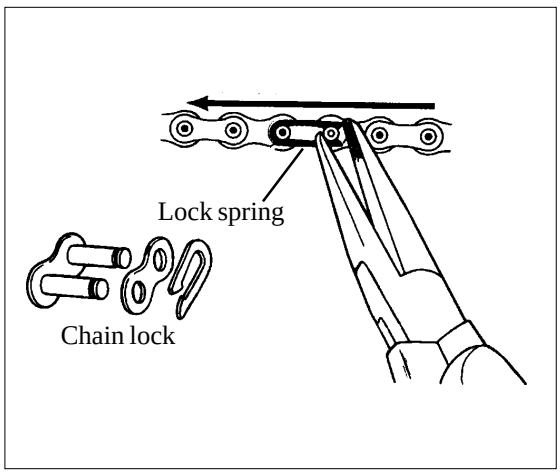

Fig. 14

REPLACEMENT OF THE FREEWHEELING SPROCKET

Remove left and right frame cover.

Dismantle the chain as described on page 20 - 21.

Loosen the axle nuts and lift off the flywheel. Remove the axle nut, washer, chain adjuster and spacer on the freewheel side. Place the special remover (part No. 9100-14) in the adapter and place the spacer and axle nut outside. See fig 15.

NOTE: Do not tighten the axle nut completely. It must be possible to loosen the adapter-sprocket half a turn.

Replace sprocket-adapter and assemble the new parts in reverse order according to the above.

LUBRICATION SPROCKET

The sprocket should be lubricated with a few drops of oil once a year. Incline the cycle somewhat to make it easier for the oil to reach the bearing. See fig 16.

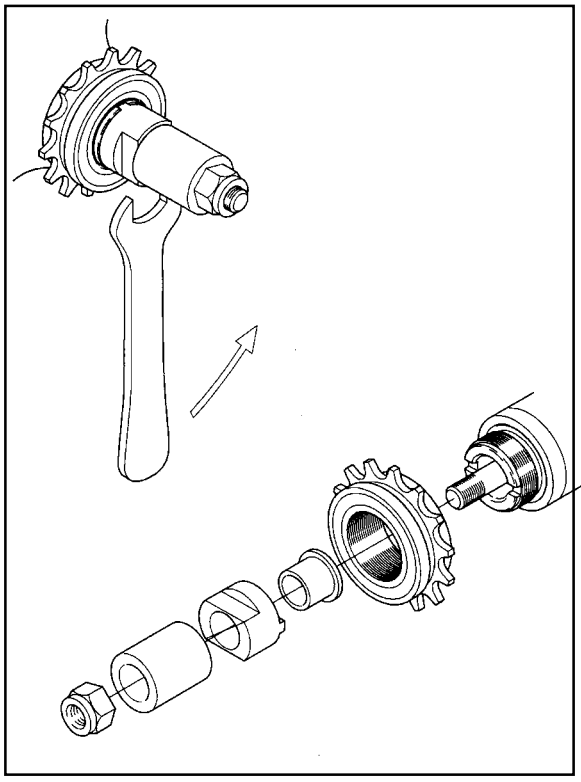

Fig. 15

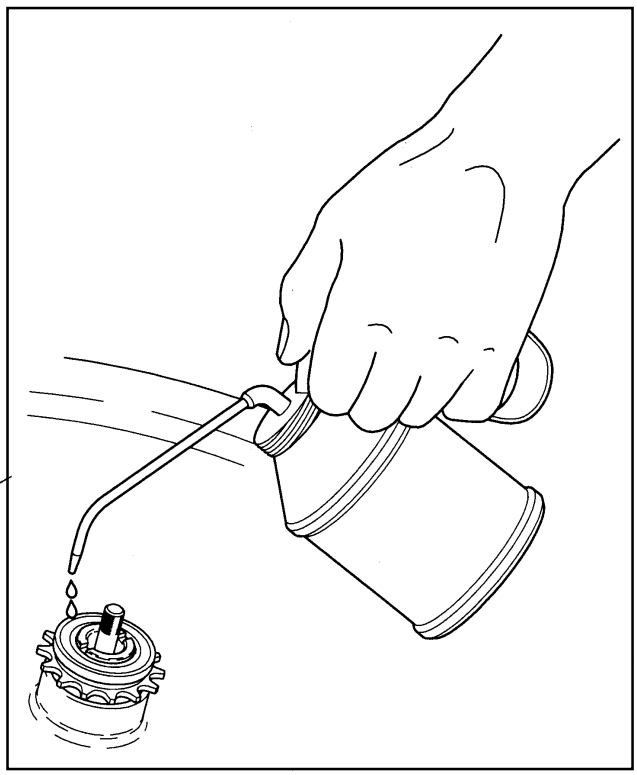

Fig. 16

VEVLAGER

Vevlagringen är typ kasettvevlager och fordrar normalt inga åtgärder.
Om fel i lagringen konstateras eller misstänks vänd Er till fackman för byte.

BROMSHJULSLAGRING

Lagren i bromshjulet är livstidssmorda och fordrar normalt inga åtgärder.
Om fel i lagren misstänks eller konstateras, vänd Er till fackman för byte.

SERVICE
Kontrollera:
☐ att kedjan går jämnt och att det inte finns något glapp i vevlagringen
☐ att pedalarmarna sitter ordentligt fast på vevaxeln
☐ att pedalerna roterar mjukt och att pedalaxeln är ren från diverse smuts
☐ att pedalaxlarna sitter ordentligt fast i vevarmarna
☐ att bromshjulet ligger i centrum och roterar jämnt
☐ att styret ej sitter högre än markeringen på stammen
☐ att tryckbrickan ligger kvar vid sadellåsningen
☐ att sadelklamman är ordentligt åtdragen
☐ att bromsbandet inte visar på stora förslitningsskador
☐ att pedaler och kedja är smörjade

THE IMPORTANCE OF REGULAR EXERCISE

The human body is built for action – not for rest. Once upon a time this was a necessity: the struggle for survival demanded good physical condition. But optimal function can only be achieved by regularly exposing the heart, circulation, muscles, tendons, skeleton and nervous system to some loading, i.e. training.

In the old days the body got its exercise both in work and at leisure. In our modern society, however, machines have taken over an ever increasing share of the tasks which were formerly accomplished with muscular power alone. Our life has at an accelerated tempo been dominated by sitting, riding and lying. Thus, the natural and vital stimulation that tissues and internal organs receive through physical exercise has largely disappeared. Certain tissues such as muscles, bone and blood and also a number of bodily functions can adapt to inactivity – and to stress. Studies have proved that if you use 30 minutes for exercise like brisk walking, running, bicycling, swimming or skiing 2-3 times a week, your condition has been improved by some 15 per cent after a few months. The efficiency of the heart muscle will increase and joints and muscles grow in strength. The capillary density increases in the trained muscle and their enzymatic activities are enhanced. The body adapts to the new demands. The perceived exertion at a given rate of exercise becomes reduced.

With increased physical activity fatness is concentrated, the appetite functions “safer”, you can eat more without risk for overweight and thereby the risk of lack of important essential food nutrients decreases. For many individuals the effect of habitual physical activity also improves the wellbeing and it is a good feeling to have a potential to cope with straining situations.

What kind of exercise to choose?

1. You should have fun when exercising. Choose something you find pleasure in doing regularly.

2. To get o good effect out of the training you should choose a form of exercise that engages large muscle groups. Then the demand of increased blood flow and oxygen transport will be so great that heart will increase its pump capacity. Jogging, calesthenics, aerobic dancing, bicycling, swimming, skiing and walking are excellent examples of exercises meeting this requirement.

IN A FEW MONTHS YOU CAN GET 10-15 YEARS YOUNGER

If you cycle 30 minutes a few times a week you can lower your condition age with 10-15 years! Scientifically this is described as a reduction on the biological age. Externally, you are your usual self. Internally, however, you feel much younger. In other words: You can work harder. You feel more alert and healthy. Your ability to handle stress and problems increases. There are few better ways to improve your physical condition than to cycle. It does not over-tax your joints. It builds up your condition progressively and at your own pace – and you can make your training fit weather conditions.

DO I LOOSE WEIGHT WHEN I CYCLING?

Yes! You do lose calories. A few miles on your bike every day over one year, you will have lost the equivalent of 20 pounds of body fat. You will achieve best results if you combine exercise with healthier eating. A little less sugar, less butter on your bread or less fat in your frying pan. And a few miles on your bike every day. In a year you will have lost 20 pounds.

DO I GET STRONGER?

Cycling strengthens the muscles of the back, abdomen and legs. Daily chores become easier. Cycling also makes your heart stronger. Your pulse rate gets lower even when you exert yourself a little extra. Regular exercise also has a favourable influence on high blood pressures.

HOW DO I TRAIN?

1. Warm up 3-5 minutes with a low pedal resistance. Pedal about 12 mph (20 km/h).
2. Increase the resistance until you feel the training “somewhat hard”. Keep the speed for 2-5 minutes. Get off the Ergometer and rest a few minutes. Cycle again and then rest. Train at your own pace and with a comfortable pedal resistance. After a few weeks you can increase the resistance.
3. Before ending, pedal a few minutes with a light resistance, in order to step down your training.

Total time about 30 minutes.

Strength training:

1. Give yourself a thorough warm-up.
2. Pedal with a heavy resistance for 5-10 seconds, then rest 45-60 seconds. Repeat this 5-10 times.

It is a good idea to combine your cycle training with gymnastics for 5 minutes, as this will give you a physiologically well-balanced form of training.

(Elderly people and physically weak persons should consult a doctor before starting their training.)

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